FIGURE 1

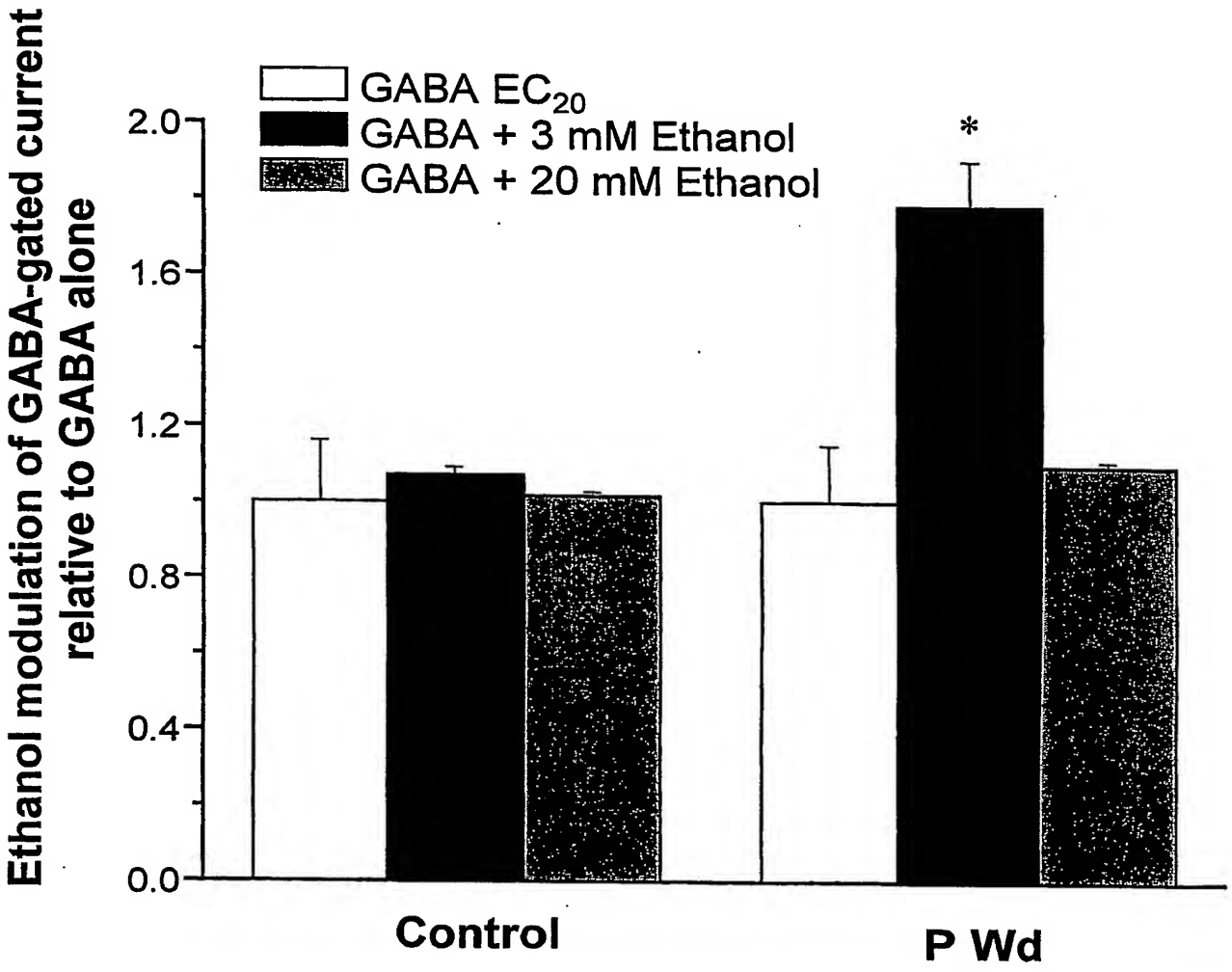
Ethanol modulation of GABA-gated current relative to GABA alone
GABA EC20
GABA + 3 mM Ethanol
GABA + 20 mM Ethanol
2.0
1.6
1.2
0.8
0.4
0.0
*
Control
P Wd

FIGURE 2A

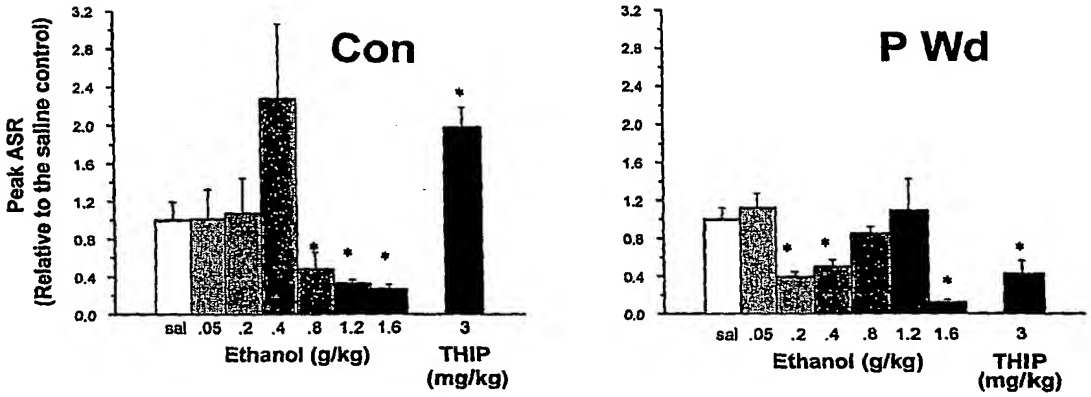
Con
P Wd
Peak ASR
(Relative to the saline control)
3.2
2.8
2.4
2.0
1.6
1.2
0.8
0.4
0.0
sal .05 .2 .4 .8 1.2 1.6
Ethanol (g/kg)
3
THIP
(mg/kg)

FIGURE 2B

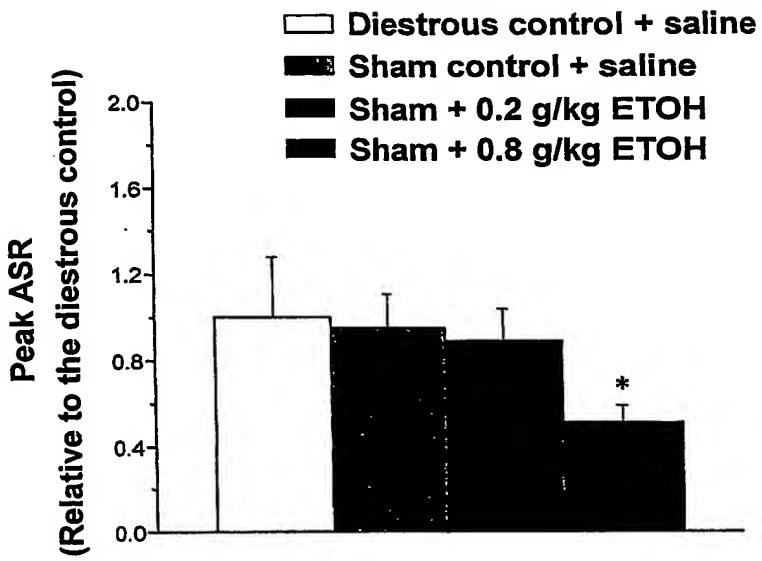
Diestrous control + saline
Sham control + saline
Sham + 0.2 g/kg ETOH
Sham + 0.8 g/kg ETOH
Peak ASR
(Relative to the diestrous control)
2.0
1.6
1.2
0.8
0.4
0.0
*

FIGURE 3

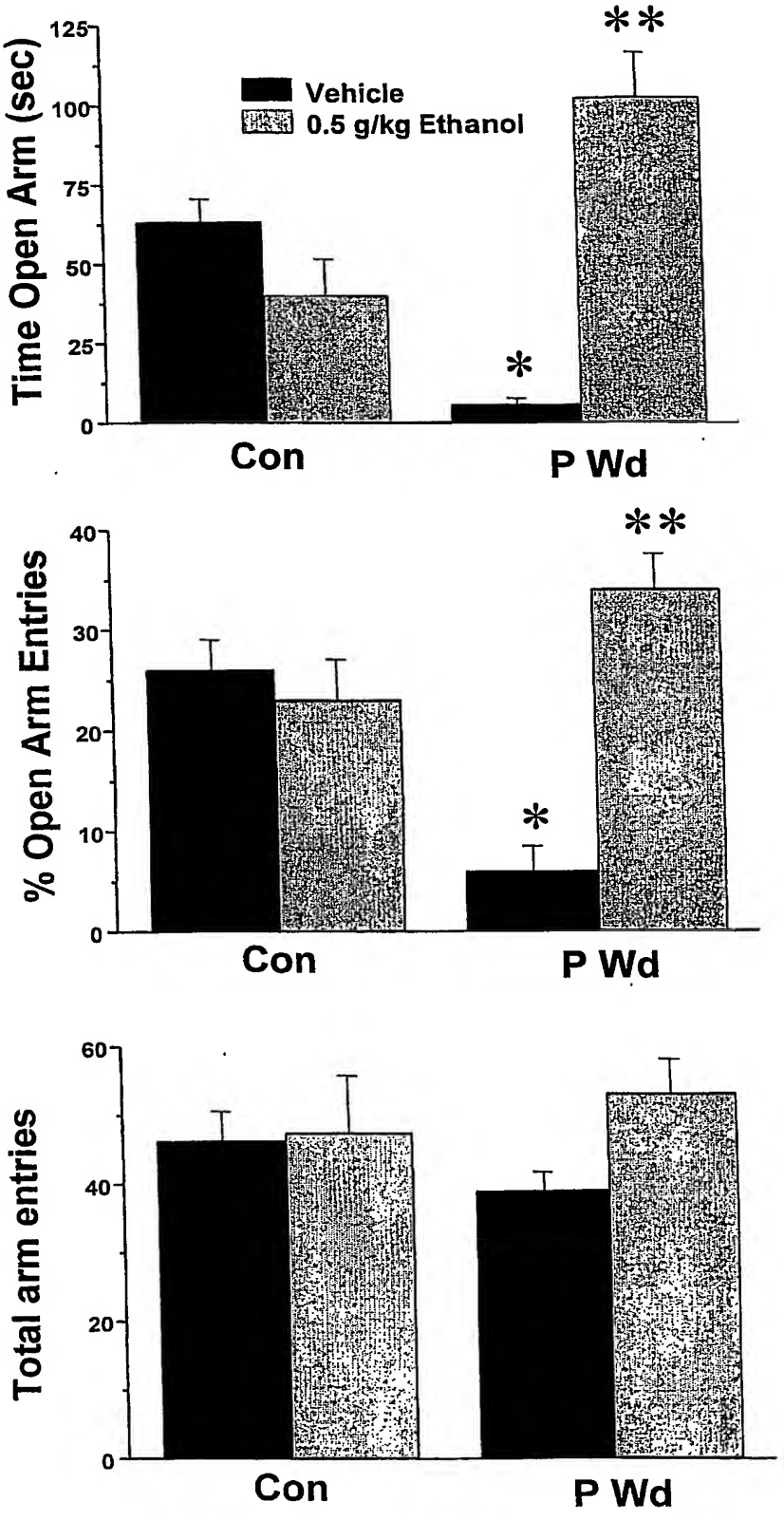
Time Open Arm (sec)
125
100
75
50
25
0
Vehicle
0.5 g/kg Ethanol
**
*
Con
P Wd
% Open Arm Entries
40
30
20
10
0
**
*
Con
P Wd
Total arm entries
60
40
20
0
Con
P Wd

FIGURE 4

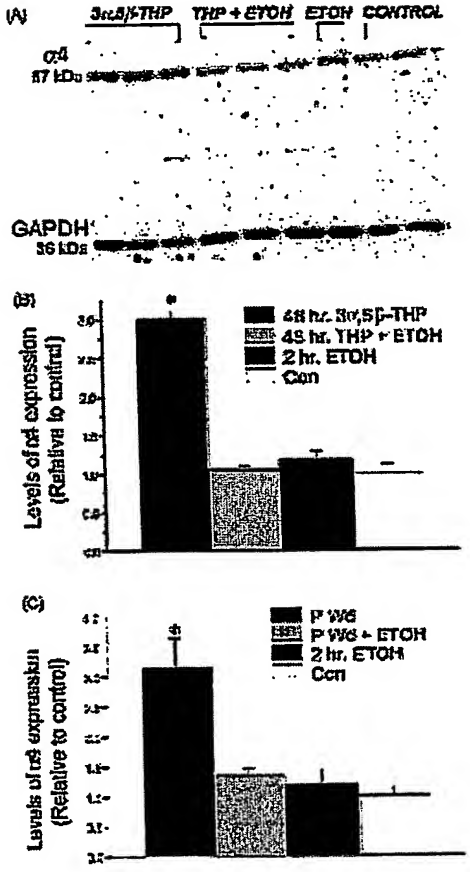
(A)
3α,5β-THP
THP + ETOH
ETOH
CONTROL
α4
87 kDa
GAPDH
36 kDa
(B)
48 hr. 3α,5β-THP
48 hr. THP + ETOH
2 hr. ETOH
Con
Levels of α4 expression
(Relative to control)
(C)
PWS
PWS + ETOH
2 hr. ETOH
Con
Levels of α4 expression
(Relative to control)

FIGURE 5

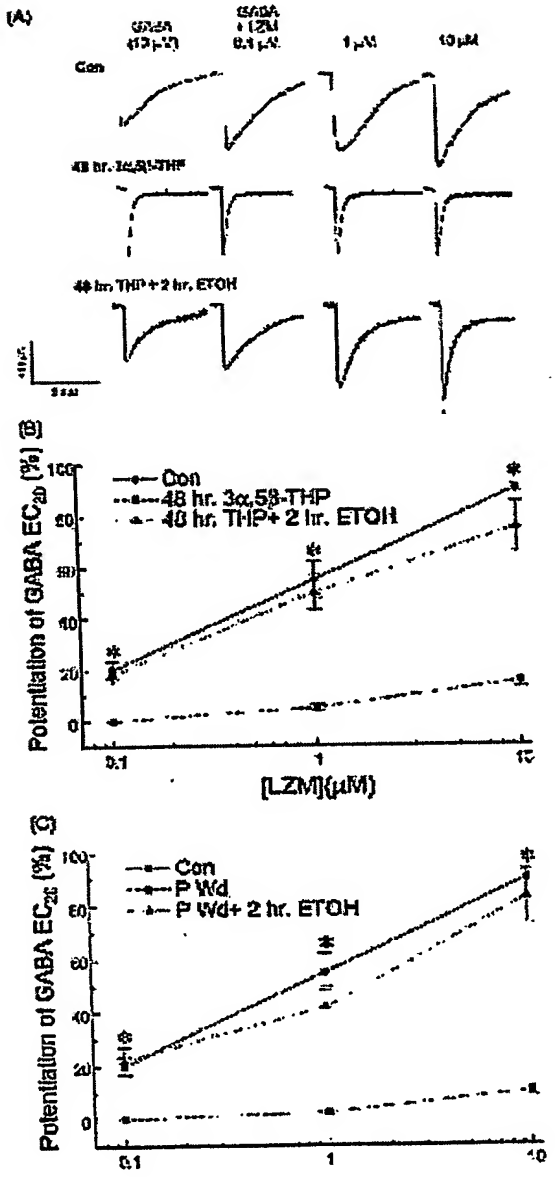
(A)
Con
48 hr. 3α,5β-THP
48 hr THP + 2 hr. ETOH
(B)
Potentiation of GABA EC20 (%)
Con
48 hr. 3α,5β-THP
48 hr. THP+ 2 hr. ETOH
[LZM](μM)
(C)
Potentiation of GABA EC20 (%)
Con
P Wd
P Wd+ 2 hr. ETOH

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FIGURE 6

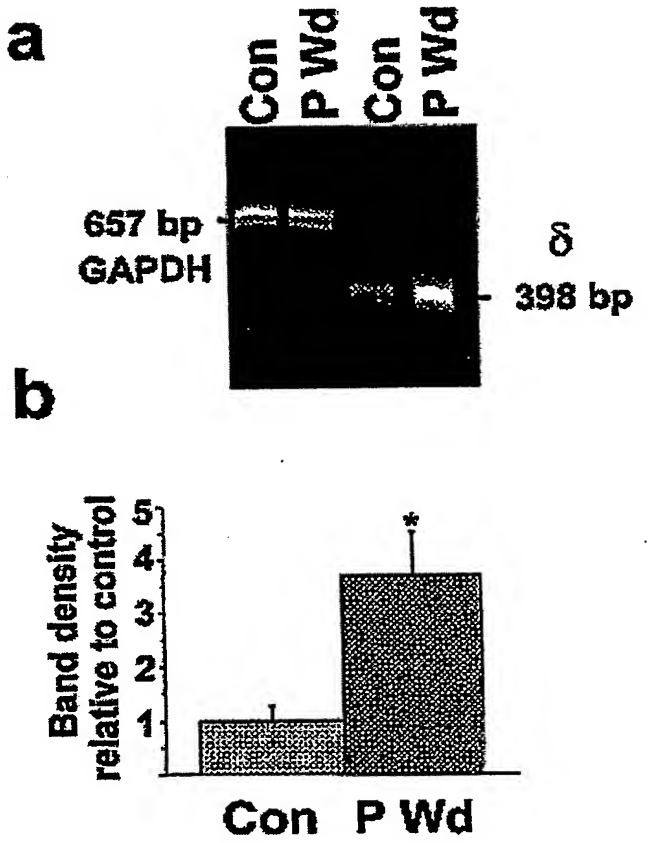


FIGURE 7

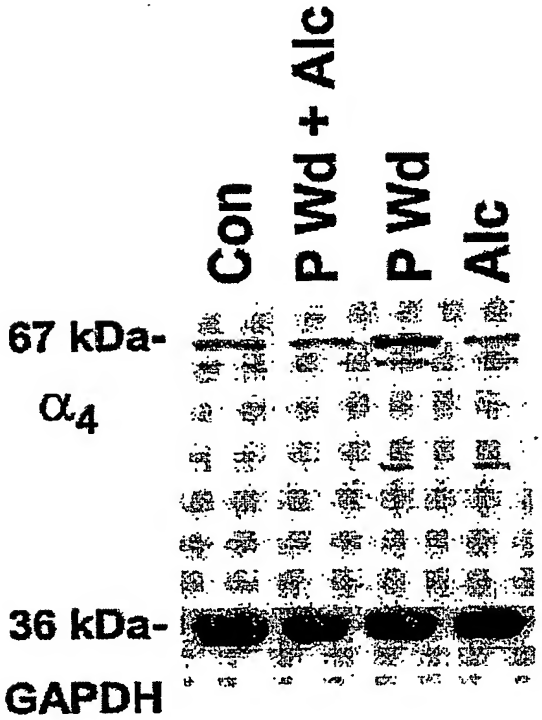


FIGURE 8A

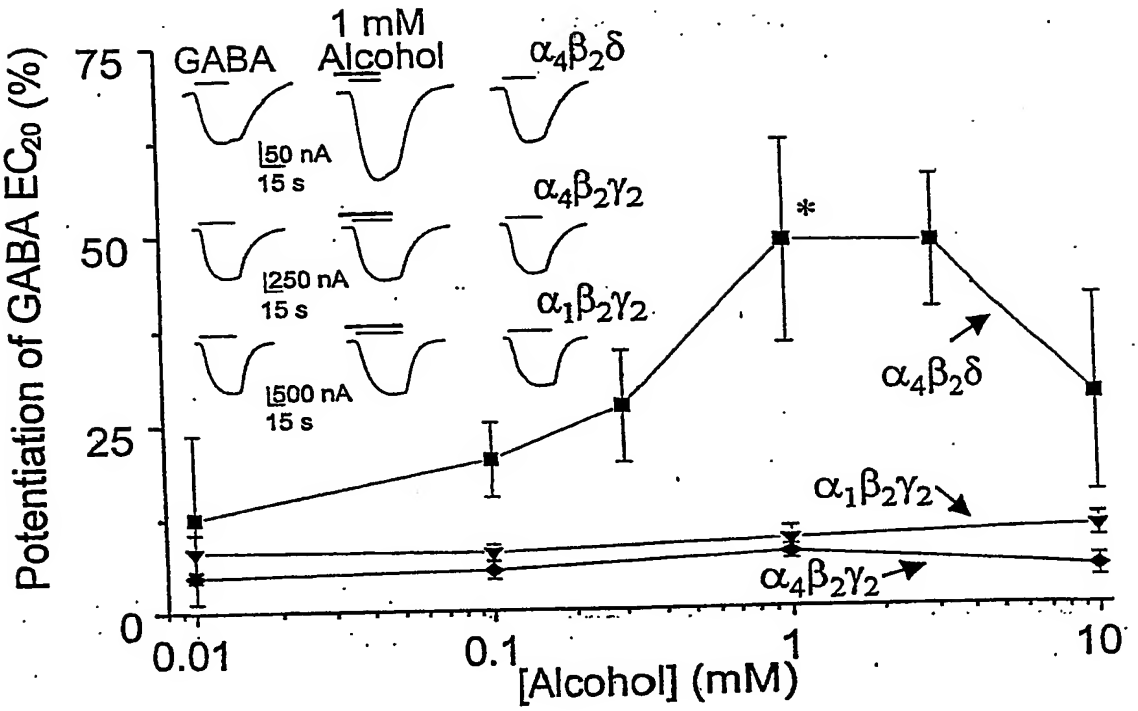
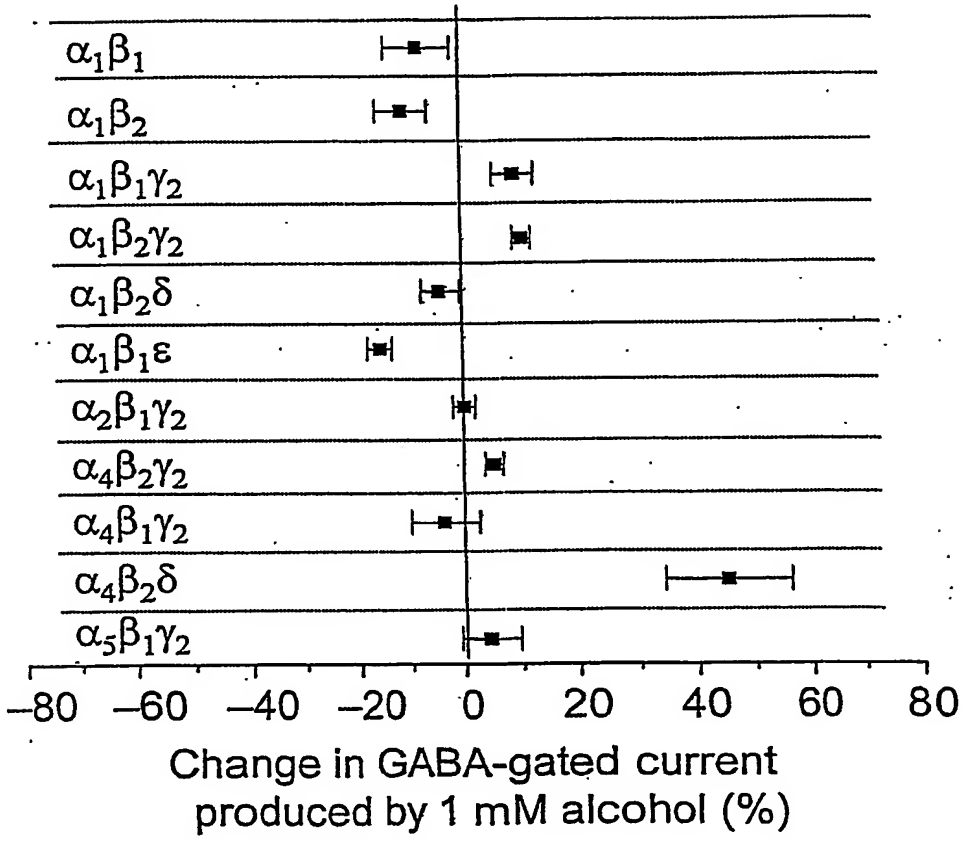

1 mM
Alcohol
GABA
$\alpha_4\beta_2\delta$
50 nA
15 s
$\alpha_4\beta_2\gamma_2$
250 nA
15 s
$\alpha_1\beta_2\gamma_2$
500 nA
15 s
*
$\alpha_4\beta_2\delta$
$\alpha_1\beta_2\gamma_2$
$\alpha_4\beta_2\gamma_2$
Potentiation of GABA EC_{20} (%)
75
50
25
0
0.01
0.1
1
10
[Alcohol] (mM)

FIGURE 8B


$\alpha_1\beta_1$
$\alpha_1\beta_2$
$\alpha_1\beta_1\gamma_2$
$\alpha_1\beta_2\gamma_2$
$\alpha_1\beta_2\delta$
$\alpha_1\beta_1\varepsilon$
$\alpha_2\beta_1\gamma_2$
$\alpha_4\beta_2\gamma_2$
$\alpha_4\beta_1\gamma_2$
$\alpha_4\beta_2\delta$
$\alpha_5\beta_1\gamma_2$
−80 −60 −40 −20 0 20 40 60 80
Change in GABA-gated current
produced by 1 mM alcohol (%)

FIGURES 9 A-D

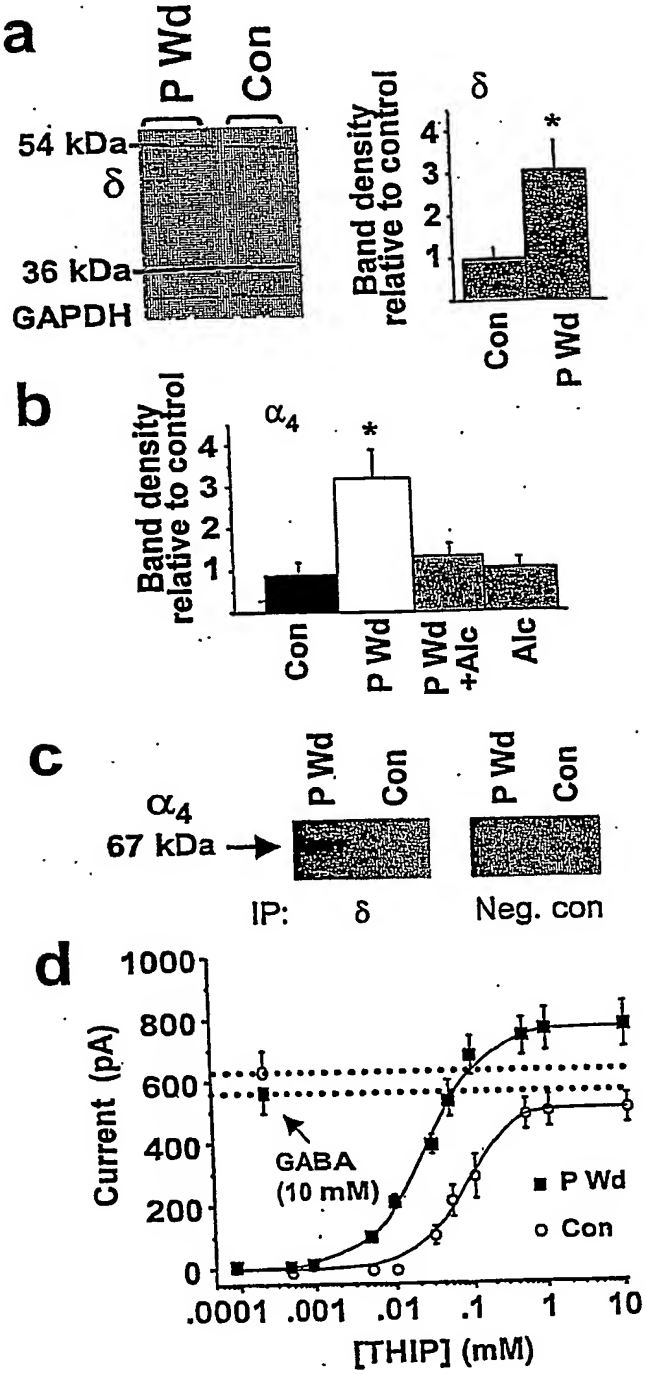

a
P Wd
Con
54 kDa
δ
36 kDa
GAPDH
Band density relative to control
δ
*
Con
P Wd
b
Band density relative to control
α4
*
Con
P Wd
P Wd +Alc
Alc
c
α4
67 kDa
P Wd
Con
P Wd
Con
IP: δ
Neg. con
d
Current (pA)
1000
800
600
400
200
0
GABA (10 mM)
P Wd
Con
.0001 .001 .01 .1 1 10
[THIP] (mM)

FIGURE 10A

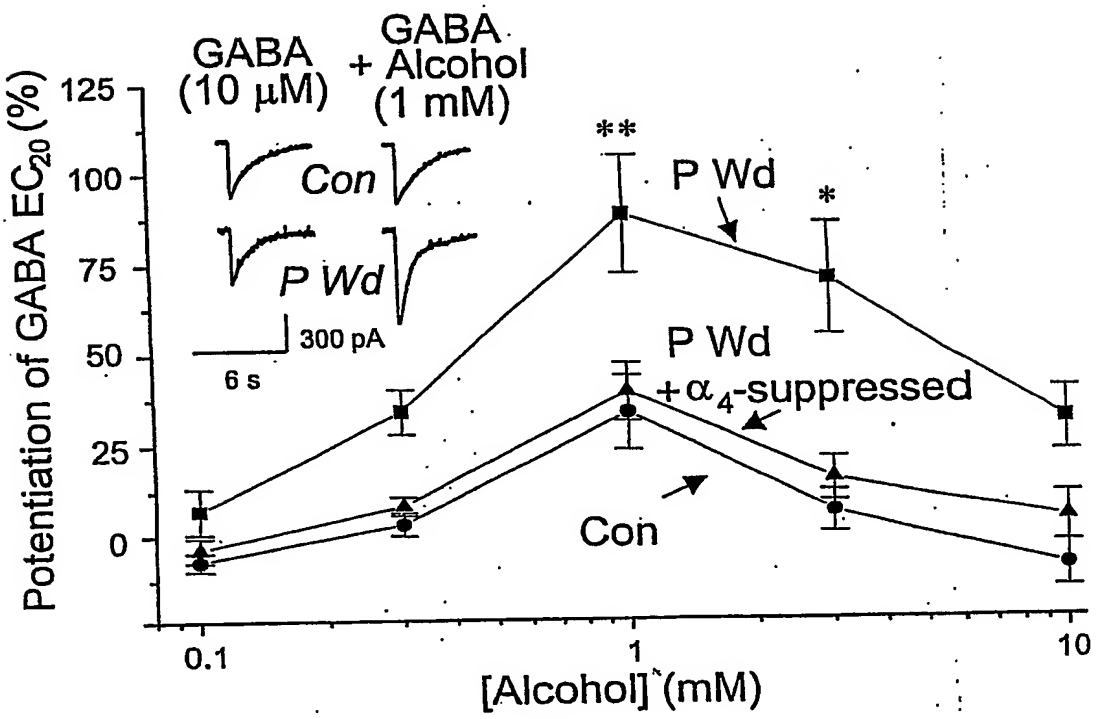
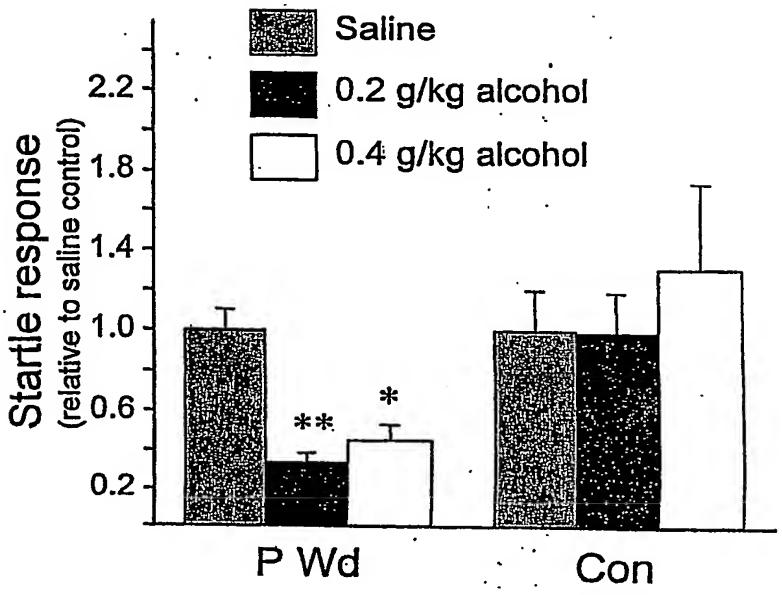

GABA (10 μM)
GABA + Alcohol (1 mM)
Con
P Wd
300 pA
6 s
Potentiation of GABA EC20 (%)
125
100
75
50
25
0
**
*
P Wd
P Wd +α4-suppressed
Con
0.1
1
10
[Alcohol] (mM)

FIGURE 10B


Saline
0.2 g/kg alcohol
0.4 g/kg alcohol
Startle response
(relative to saline control)
2.2
1.8
1.4
1.0
0.6
0.2
**
*
P Wd
Con